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WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

AUG 9 1924

REPORT FOR WEEK ENDING AUGUST 2, 1924.
(Unless otherwise indicated.)

HAVRE:

The fore part of the week was the warmest of the season. Maximum temperatures of 94 and 95 degrees were recorded on the 27th and 28th, respectively. The remaining days were somewhat cooler. Precipitation, amounting to .85 inch, fell in less than thirty minutes on August 1. Hail and wind accompanied the storm. Corn leaves were somewhat cut up and oats just ripening, shattered out considerably. Wheat and barley were only slightly damaged. The storm, however, was more beneficial than harmful in that the moisture will greatly improve the filling of the cereals and help out other crops which have been suffering from the drought.

Harvesting of oats and barley plats on the rotations was completed July 31. Second cutting of alfalfa was finished August 1. Corn is beginning to tassel.

The spring wheat in Hill County as seen on a tour throughout this section on August 1 shows the crop to be the most promising in recent years

Mr. A. H. Post, Field Inspector for the Montana Seed Growers Association, visited the station on the 30th.

Director F. B. Linfield, of the Montana Experiment Station, was a visitor on August 1.

Maximum temperature 95, minimum 43; precipitation .35 inch.

JUDITH BASIN:

Hot, dry, windy weather has prevailed during the greater portion of the week and all crops are suffering from lack of moisture. Winter wheat has matured very rapidly and a number of plats are practically ready to harvest. Oats have also ripened unusually fast, and harvesting of oats has commenced in the cereal nursery. Most of the oats on the rotations will be ready to cut next week. Corn is curling badly, potatoes are wilting and all other crops are showing the effect of the continued hot, dry weather.

Field work has been devoted to the cultivating of all row crops, trees and fallow, and to the rogueing of noxious weeds and grain mixtures on all of the experimental plats. Field peas on the rotations were plowed under, July 28. All potatoes were sprayed and stacking of hay was completed.

Visitors during the week were Mr. M. A. McCall, of the Office of Cereal Investigations, Director F. B. Linfield and Mr. A. H. Post, of the Montana Experiment Station.

Maximum temperature 92, minimum 40; precipitation 0.

HUNTLEY:

Winter rye, winter wheat and oats were harvested during the week as were also a few plats of barley and flax. Considerable difficulty was experienced in cutting some of the oats plats because of the lodged and badly tangled straw. Lodging was met with to a small extent in a few of th winter wheat plats but the condition was not serious. Spring wheat is ripening slowly but a few plats should be ready to harvest before long.

Corn, sorghums, beans and similar warm weather crops continue to make good progress. Alfalfa and brome grass are beginning to make growth after the first cutting and the rows appear quite green again.

Maximum temperature 97, minimum 51; precipitation .01 inch.

SHERIDAN:

The weather continued hot and dry throughout the week. Spring wheat seems to be filling well, however. Corn has curled badly during the day but has continued to make good growth. Sorgo and other late forage crops have been making rapid growth.

All winter wheat, barley, and oats in the rotations have been harvested. All but Buffum's No. 17 of the winter wheat varieties, and the rates and dates of seeding up to the October 1 seeding, the earlier oats varieties, and all of the barley varieties also have been cut. Harvesting of the rates and dates of seeding winter wheat was difficult because of the heavy stand and lodging.

Temperatures for July up to the 25th were the lowest recorded at this station. The last week was somewhat above normal, and the average mean for the whole month was the same as in 1922, which was the lowest recorded to that time. Rainfall for the month amounted to .93 inch, .61 inch below the average from 1917 to 1923. Only one shower early in the month came in sufficient amount to be of benefit to growing crops.

A community picnic was held on the station July 30. Attendance was reported at about 1500, about half of whom were farmers. Marked interest was shown by the farmers present in the work of the station. Senator Kendrick gave a brief talk. Refreshments were furnished by the Sheridan Commercial Club.

Maximum temperature 97, minimum 43; precipitation .03 inch.

MANDAN:

Agronomy.

The past week has been favorable for field crops. All corn on the station was given the last cultivation during the week. It has made good growth, but appears about two to three weeks late.

Mandan, continued:

Self-pollination of corn continued during the week. About 1,000 ears will be self-pollinated.

Winter rye was harvested on July 26, and winter wheat on July 30.

Rust has developed on the late wheat over this section during the past week, and the indications are that the yield of late wheat will be reduced. About 75 per cent of the wheat is past much danger from rust.

Cooperative Grazing Experiment.

The needles in the prarie hay have practically all dropped, and hay will be ready to cut next week. Native vegetation is still in excellent condition for grazing.

The cattle of all pastures were weighed on July 30. The gains in all pastures were very good. They have been exceeded during two other seasons. The following gains were made during the month of July and for this season:-

Pasture	July gain per head.	65-day gain per head.
100-acres	105.5	234.5
70-acres	86.0	225.0
50-acres	93.0	224.0
Rotation, 70 acres	81.3	201.3
30-acres	75.5	211.0
Brome, 35 acres	76.1	226.1

The cattle in the brome pasture still have an abundance of feed. It is mature, and new growth has not started. There was still plenty of feed in the rotation pasture. The cattle grazed down only about half of the feed in the division during July. The 30-acre pasture is getting short.

Maximum temperature 87, minimum 52; precipitation .12 inch.

Visitors of the week included:-

L. B. Gove, Crop Reporter for the American Linseed Company. He reports the flax crop throughout North Dakota in excellent condition generally, and promising an acre yield somewhat greater than that of last year.

J. Allen Clark, Agronomist in Charge of Western Wheat Investigations, Office of Cereal Investigations.

M. A. McCall, Agronomist in Charge, Administration of Agronomic Division, Office of Cereal Investigations.

Dr. H. K. Hayes, Professor in Plant Breeding, Minnesota University.

Olaf S. Aamodt, Pathologist, Office of Cereal Investigations.

L. R. Waldron, Professor in Plant Breeding, North Dakota Agricultural College.

Orris W. Roberts, U. S. Weather Bureau.

Jay G. Diamond, Agricultural Statistician, Division of Crop Estimates.

Mandan, continued:

Horticulture.

Most of the work the past week consisted of fruit picking and sweet corn breeding, with one man and team doing field cultivation.

All red currants have now been picked. The yield was very good of most varieties. Cherry, New Perfection, and Chautauqua, produced very large attractive fruit, although the yield was not as high as of some of the smaller fruited varieties.

Juneberries are still producing fruit although now picked four times. A few quarts of raspberries were picked, also some of selections of Ribes odoratum.

Prunus tomentosa again yielded a good crop, although not as large as last year.

About 600 ears of sweet corn have been bagged in the ear to row plantings with about one-half of them already pollinated.

Tomatoes, both in the acre garden and in the breeding plat, have set a good crop of fruit, but none is ripe yet.

The same varieties of vegetables as last week are being harvested from the Acre garden. The peas and early cauliflower are about gone, with increasing yields of beans, cabbage, carrots, beets and potatoes coming on.

Arboriculture.

Shelterbelt Inspection Reports:

A. W. Emerson.

Chester, Montana, July 28. Hot and dry. Crops suffereing from lack of moisture.

Shelby, Montana, July 30. West of Sweetgrass crops planted on fallow are fair, poor otherwise. Need rain badly. Trees doing very well. Excellent ground preparation for 1925 plantings.

R. W. Hansen.

Buffalo, Wyoming, July 23. Now on original schedule. Some car trouble lately.

Mandan, continued:

E. J. George.

Ismay, Montana. July 27. Crops good - 110° here today.
Baker, Montana. July 28. Heat has been intense. Found most of cooperators lying in shade of shelte belts, so they seemed to be serving some purpose. Heavy storm here tonight

Picking Caragana seed started today, August 2. About half the seed is ripe enough to pick. Should complete harvest by the middle of next week. Crop of seed is excellent.

Thinning of all trees in the nursery has been completed, and condition of stock is very good.

BELLE FOURCHE:

Harvesting is nearly completed on the dry land rotations. All of the oats, barley, winter wheat and winter rye are in the shock and most of the spring wheat has been harvested. The soil in the grain plats is bone dry and the wheat is drying up rather than ripening.

The corn on fall plowing is now well tasseled out and has not been injured greatly as yet by the extremely dry weather. Sorghum and potatoes are still growing well without being checked by drought.

The rainfall for the first seven months of the year was 5.64 inches. The average for this period is 10.94 inches. Storms have been numerous but precipitation scant of late. There has been a thunderstorm on all but one of the last 18 days. The amount of rain falling has varied from a trace to .24 inch. The total rainfall for July was 1.22 inches.
Maximum temperature 95, minimum 57; precipitation, Trace.

ARDMORE:

Weather conditions continue very unfavorable. There was a torrential rainfall of .72 inch on July 31. This was accompanied by considerable hail and wind which badly damaged all crops on the eastern half of the station fields. Fortunately the rotation plats were not injured to any noticeable extent. However, fifty acres of corn that was to be used for silage was badly damaged.

The ground was very dry at the time of this rain and there was very little or no stimulation of plant growth.

All rotation plats and field of small grain have been harvested, and one field consisting of 12 acres of barley has been threshed. The yield was 13.0 bushels per acre, which was much better than was expected. The variety was White Smyrna and was so short that it could not be bound with the grain binder.

Ardmore, continued:

The steers used in the grazing experiment were weighed on July 30, and showed the following average gains per steer for the 30-day period:-

150-acre pasture - - - - - - - -	43.5 pounds
80-acre pasture - - - - - - - -	17.0 "
Rotation pasture - - - - - - - -	24.8 "

The steers in the rotation pasture were given fresh pasture on the date of weighing, and doubtless will show a gain at the end of the next 30-day period.

The total precipitation for the month of July was 2.61 inches. The total from January 1 to July 31 was 7.45 inches. The heaviest rain in a 24-hour period during the entire year was .72 inch.

Maximum temperature 103, minimum 55; precipitation .72 inch.

ARCHER:

The precipitation for June was .86 inch and for July .50 inch. The normal precipitation for these months is 1.51 and 2.04 inches, respectively. In view of this shortage of precipitation the crops are looking very well. The winter wheat on plowed fallow burned some but produced a good quality of grain. The fallow which was produced by the use of the duck-foot and not plowed did not burn as much as the plowed fallow. That seeded in corn rows will produce fair yields and that on disked oat stubble, while short, will probably yield about 10 bushels per acre.

The barley and early oats on the Dry-Land plats are showing first signs of maturity while the spring wheat and mid-season oats are in the dough stage. The 17-acre field of barley in the general field has been cut for hay and is yielding about one ton per acre. This hay is of very fine quality and is being stored for the dairy stock.

During the last few days the millet and corn have rolled badly and the sunflowers have wilted. The latter crop is producing its first blossoms, the growth being rather short.

Maximum temperature 91, minimum 46; precipitation .03 inches.

COLBY: Week ending July 26, 1924.

The first of the week saw the completion of the oat and spring wheat harvest on the project. The orchard was harrowed with a spring-toothed cultivator during the week. All corn plats and the surface planted sorghum plats were cultivated during the week. A general clean up of odd jobs was done so that threshing could start the first of the coming week. Part of a load of winter wheat was threshed today to see that the separator was adjusted properly.

Colby, continued:

Corn and sorghums, esrecially corn, is needing rain badly. Several of the corn plats are beginning to show the need of rain quite severely. Sorghum crops are scarcely showing above the lister furrows where listed. In general, sorghums are very thin and spotted in the county.

Yields of winter wheat so far threshed in the county are running from 5 to 35 bushels per acre. Yields in most places are surprisingly high. All of the wheat tests good, the test running from 59 to 64 pounds to the bushel.

Superintendent F. A. Wagner, of the Garden City Station, visited station the first of the week.

COLBY:

Threshing of cereal crops was the main work done during the week. All of the plats on the D. L. A. project were threshed. Yields of winter wheat varied from 1.1 bushels to 47.5 bushels per acre. The lowest yield recorded was on the continuous stubbled-in plat, and the highest yield was on MF-J plat. Spring wheat yields varied from 1.1 bushels to 7.1 bushels per acre. Barley yields varied from 5.9 bushels to 40.4 bushels per acre. The highest yield in each case being on the MC-fallow plat. Oats yields varied from 11.6 bushels to 28.1 bushels per acre. The barley variety test was threshed and yields calculated. Of the nineteen varieties the four leading varieties were Local Six-Row 21.8 bushels per acre, Stavorpol 21.4 bushels, Flynn 20.6 bushels, and Club Mariout 20.4 bushels per acre. The Local Six-Row is practically identical with the Stavorpol barley.

The first rain of any consequence fell the evening of the 30th, 0.78 inch of rain falling in less than one-half hour. This was followed later with 0.20 inch. A good deal of this rain was lost in run-off. There was sufficient absorbed by the soil to help the rowed crops. Corn on Rotations MCA and MCB & E/4, 3, and 4 have dried considerably, so that any corn from them is questionable even with ample rain from now on.

Milo is just showing a few heads on fallow land, corn is tasseling and silking.

Professor Gainey, of the Kansas Station, was a visitor today.

GARDEN CITY:

Hot and dry weather has continued throughout the past week. One shower totaling .38 of an inch was received on the 29th. Most of the row crops are beginning to roll badly during the day, but so far no firing has taken place. Most of the sorghums are now in the boot.

Garden City, continued:

All small grains on the dry land project were threshed this week. Most winter wheat plats yielded well, but the quality of the grain is only fair. The highest yield, 32.2 bushels, was obtained from wheat growing on fallow after kafir. The lowest yield, 11.0 bushels to the acre, was secured from a plat on which the wheat was drilled on disked milo stubble. Spring wheat yielded 7.7 bushels, barley 12.5 bushels and oats 29.7 bushels. The quality of the spring grains was only fair.

Field work this week has consisted of cutting the first crop of Sudan, turning under Sudan for green manure, and threshing.
Maximum temperature 104, minimum 61; precipitation .38 inch.

DALHART:

There was a temporary relief in the drought this week. The temperature, however, has remained high with a brisk wind during most of the week. The rain was only local in character but quite variable in quantity. In some sections it was in abundance while in others it was barely enough to lay the dust. At the station a fair rain was recorded, netting .39 inch. The crops are heading here in a number of varieties and rain is badly needed. The weather in the next two weeks will determine largely the yield for this year on some varieties. Crops generally have been rolling considerably during the hottest part of the days and some are firing badly. The broomcorn is firing more than any other crop.

Damage to crops from grasshoppers, jack rabbits, etc., has been unusually bad this year. Cotton, Mexican beans and milo were damaged more than any other crop. Mexican beans were replanted today for the third time in an effort to get a stand. The hoppers and rabbits have mowed it off level with the ground so far. Poison applied has been effective to some extent but shooting has proven to be more effective. For several nights, beginning about 9:00 p.m., the station force has been going over the station in a car with a spotlight and three shot guns shooting rabbits. They were found to be in the fields in droves. By this means the number has gradually been reduced and it is hoped that it can be eliminated after a few more rounds in this manner. Many farmers are complaining of damage from this and other causes this year.

Since the rain of .39 inch the teams have been in the field cultivating. The fields are clean but the cultivating is being done shallow in order to break the crust and assist in the retention of at least a part of the much needed moisture.

Plans are being made to hold a farmers' and business men's picnic at this station on August 21. During the week beginning August 18, there are going to be community gatherings at different points over Dallam and Hartley counties, to be held each night. Prominent speakers and entertainment will be furnished for each nightly program. This is being widely advertised and every effort is being made to have a real picnic for all. The object of these meetings and the picnic is to create a better fellowship and cooperation on all sides. Co-workers from other stations will be welcomed on this occasion.

TUCUMCARI:

Crop growth has been unusually rapid the past week, in spite of the fact that no rain of value has been received since July 7. During the middle of the day corn and sorghum plants roll extensively and the soil is bone dry to a depth of five to seven inches, but crops have not been seriously retarded to date, as evidenced by the fact that milo and kafir planted the first week in June are in the boot on many plats. Aside from a number of north field plats which are very uneven, most plats look exceptionally well and should make fair to good yields with one or two good rains.

Stands on the cotton plats were short in many cases, necessitating chopping to a 12 inch stand or less. A number of cotton plats were abandoned, among them the unthinned plats, the 6 inch stand plats, the two plants each 12 inch plats, and two of the May 15 date plats. All other cotton was chopped to a somewhat comparable stand.

Work the past week has consisted of cultivating, hoeing, and completion of thinning on late dates, as well as running the cowpea harvester along each side of roadways to mark plat ends.

Maximum temperature 98, minimum 63; precipitation .05 inch.
Evaporation 2.686 inches. Wind velocity, 5.1 miles per hour.

BIG SPRING:

This has been another hot, dry week. Feed stuff has plainly shown the effects of it although cotton is still looking good and continues to make some growth. Milo leaves are curling badly with some of the lower ones dying. Many of the plats are beginning to head while the plants are only about two feet high.

Good rains were reported at several places throughout the county, but only a light shower of .05 of an inch hit the station.

Most of the time during the past week was spent in cultivating, hoeing, and picking peaches and grapes. Although the peach trees are bearing fairly well, the fruit is small and of a poor quality. Grapes are yielding well, but many of the bunches dried up before they ripened.

Maximum temperature 105, minimum 70; precipitation .05 inch.

LAWTON:

During the last two weeks hot winds and high temperatures prevailed at intermittent periods, covering in all five days. During the week ending August 2 there were three days of cloudy, threatening weather but no rain of any consequence was received.

Lawton, continued:

Although the surface soil is very dry cotton and sorghum crops continue to make satisfactory growth. Nearly all of the grain and forage sorghums are fully headed. Broom corn is rapidly approaching maturity. Cotton is fruiting heavily and where planted early has several well developed bolls on each plant. There will, however, be considerable abortion unless the soil moisture demands are met.

Corn matures slowly and does not give evidence of very satisfactory quality.

Such growth as was made on alfalfa during the summer was destroyed by the cotton leaf worm. An extremely heavy brood developed in the alfalfa fields and soon migrated to the cotton. Heavy damage was inflicted on a few cotton plats before the attack was completely under control. Trenches, poisoned bran mash, calcium cyanide, and lead arsenate spray were used as combative methods of control. The trench system and poisoned bran make an effective combination if carefully and diligently handled.

A heavy infestation of chinch bugs exists on most of the sorghum crops. However, the crops have made sufficient growth and development to reach maturity without much damage if weather conditions do not become drastic. This, of course, does not apply to June and July plantings.

All cowpeas were harvested during the week. The growth of forage is good and an excellent crop of peas matured.

Grasshoppers are present in large numbers. They are now too active to be caught with a hopperdozer very successfully. Although their damage does not appear to be heavy at present, they are working to some extent on the kafir heads and may do appreciable damage there.

The July precipitation consisted of eleven showers, amounting to 1.39 inches. This leaves a deficiency of 1.75 inches for the month. From January 1 to July 31, inclusive, the deficiency amounts to 4.41 inches. Although this has been a successful crop season so far, we are rapidly approaching the point where soil moisture must be replenished.

The maximum temperature recorded for the week was 103.

WOODWARD:

The weather continues to be hot and dry and part of the time very windy. Row crops, which were planted early, are in many cases beginning to need moisture. During the week the last date-of-planting on the Cereal Project, the June 15 date-of-planting of cotton, the rate cotton, which was planted the same date, the variety cowpeas and the broom corn on Dry Land Project have been thinned.

Woodward, continued:

The first grapes, Headlight, were picked today, the 2d. Other work during the week has consisted of plowing and disking wheat land, cultivating row crops, picking peaches and other fruit, and cutting and hauling in alfalfa.

Two hundred and fifty pounds of poisoned bran-mash for grasshoppers were spread Thursday morning.

Mr. E. F. Chilcott, Superintendent, left on July 30 on an official trip of inspection to the Kansas stations.

Maximum temperature 101, minimum 63; precipitation 0.7 inch.
Average wind velocity 6.0 miles per hour.

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U. S. DEPARTMENT OF AGRICULTURE

1924

REPORT FOR WEEK ENDING AUGUST 9, 1924.

HAVRE:

Following the storm of August 1 temperatures have remained cool with more than the usual cloudy skies. Precipitation was recorded on five of the past seven days. The hail damage to corn, together with the cool weather, has materially checked the growth. However, as many of the early corns are now in silk, with ample soil moisture available, it seems probable that at least a part of this crop will reach maturity sufficient for seed. Much depends, however, on weather conditions during the next four weeks.

Harvesting of varieties of oats and barley continued during the week.

The following were station visitors during the week:

Mr. E. Z. Russell, Bureau of Animal Industry.
Mr. J. Allen Clark and Mr. A. C. Dillman, Office of Cereal Investigations.
Mr. H. L. Westover and Mr. N. F. Woodward, Office of Forage Crop Investigations.

The following table shows the precipitation for the months of April, May, June, and July for 1924, as compared with a forty-year average for the same months.

	April	May	June	July	Total
1924	.32	.39	5.14	.61	7.46
40-year average	.84	1.89	2.78	1.78	7.29

Maximum temperature 85, minimum 42; precipitation .32 inch.

JUDITH BASIN:

The past week has been quite cool, and a heavy storm totalling .99 inch precipitation was received on the 5th. A large proportion of this precipitation occurred in the form of fine hail which did considerable damage to oats and corn. From 75 to 90 per-cent of the oats on the rotations in Field A were shattered out, and the leaves of corn were badly shredded. Winter wheat was damaged to a slight extent but spring wheat, barley and flax escaped practically uninjured. Hail damage was not as great in the west field, and oats on the rotations in Field B were only injured from 25 to 35 per-cent. Corn and sunflowers, about one-fourth of a mile distance from Field B, escaped uninjured. The hail storm was not very widespread, and the greatest damage was done at the station.

Judith Basin, continued:

Harvesting of oats was commenced on the rotations August 4 and all plats in Field A have been cut. Harvesting of winter wheat has also been commenced on the rotations and cereal project.

Station visitors during the week were Mr. J. A. Clark, Mr. H. L. Westover and Mr. A. W. Emerson.

Maximum temperature 80, minimum 39; precipitation 1.07 inches.

HUNTLEY:

Unseasonably cold weather has prevailed throughout the week. Most of the days have been cloudy and have threatened rain, but none has fallen The cooler weather has enabled crops to make efficient use of the limited supply of soil moisture available to them. At present sunflowers is the only crop that is wilting.

Harvesting on the Dry-Land project was resumed on the 7th and will be completed today for all small grains and early maturing crops. Many of the plats of spring wheat and barley were badly lodged, which necessitated their being cut in one direction in order to make a clean job of it. Threshing is well under way throughout the community and it is reported that dry-land winter wheat is yielding from 30 to 50 bushels per acre, and the grain is generally of good quality.

Station visitors during the week included Mr. C. S. Scofield, Mr. H. L. Westover and Mr. O. J. Grace of the Department of Agriculture, Director Linfield, of the Montana Experiment Station, Dr. Elwood Mead and staff, of the U. S. Reclamation Bureau, and Garet Garrett, of the Saturday Evening Post.

Maximum temperature 87, minimum 41; precipitation 0.

SHERIDAN:

The weather has continued dry, but the temperature on the whole has been more moderate than last week. The condition of the corn seems to have improved somewhat with the slightly cooler weather. Sorgo and other late crops have continued rapid growth.

The rates and the earlier dates of spring wheat have been harvested. The remainder of the rates and dates of seeding winter wheat, except the November seeding and the rest of the oats varieties, also were cut.

Several of the spring wheat varieties are now ripe and the spring wheat in the rotations is turning.

Mr. Westover, of the Forage Crops Office, visited the station Monday.

Maximum temperature 87, minimum 44; precipitation .05 inch.

DICKINSON:

The weather of the past ten days has been very cool and cloudy on several days. This has been ideal for the maturing of small grains but corn has developed very slowly. Northwestern Dent corn on the rotations is not fully tasseled and it looks unlikely that any mature corn will be secured this season.

Winter wheat and rye and early varieties of oats and barley have been cut. These grains are well filled and yields are above average. Winter wheat is of excellent quality and will probably yield above the spring varieties.

Yields of wheat on the rotations will be somewhat reduced by a root-rot that has been identified as a species of Helmenthosporium. Diseased plants are headed out but are usually much shorter than the non-infected ones. They appear as though prematurely ripened, the roots are rotted off, the stem is white and the heads are not filled, due to the cutting off of the food supply at the roots. Most of the plants have dark brown to black streaks at the ground line and up to the first node. Ther appears to be no correlation between the amount of damage and the tillage method on which the wheat is grown. Durum wheats are more heavily infected than are the common wheats. On the rotations the Nodak variety of durum has an average of about 20 per cent of the blighted heads. The worst plat has between 40 and 50 per cent damage.

Brome, slender wheat and crested wheat grasses were cut for seed August 5.

Considerable time has been spent during the week in roguing grain for seed.

Visitors during the past two weeks included Director P. F. Trowbridge, R. L. Miller and L. R. Waldron, of the North Dakota Experiment Station; Max A. McCall, T. R. Stanton, J. A. Clark, E. B. Lambert, R. L. Fletcher and W. Butler, of the Office of Cereal Investigations; Dr. H. K. Hayes and Olaf Aamodt, Minnesota Experiment Station, and Mr. H. E. Aldous, of the Land Classification Division, U. S. Geological Survey.

Maximum temperature 80, minimum 38; precipitation .21 inch.
The precipitation for July amounted to 2.69 inches.

MANDAN:

Agronomy.

The past week has been favorable for all field work. It was cool for this time of year. The rust, which made a rapid advance during the preceding week, did not make much advance during the past week. The danger from serious rust damage is now practically past. Harvesting of wheat is now general over this section, and the indications are for good yields. Corn made good growth during the week, but rain is needed as the soil is getting very dry.

Mandan, continued:

Harvest on the station is well advanced. Practically all of the barley, and part of the wheat and the oats, have been cut in the rotations, as well as most of the varieties for the Office of Cereal Investigations.

A disease called "Root-Rot" shows up in nearly all wheat plots. Whole plants are taken by it and the yield will be reduced because of it.

The maximum temperature during the week ranged from 68° to 84° and the minimum from 43° to 52°.
Maximum temperature 84, minimum 43; precipitation, Trace.

Cooperative Grazing Experiment.

Native vegetation is starting to dry up in spots. While the grass in most pastures is still in good condition for grazing, the smaller pastures show indications of failing.

The needles in the units of the mowing experiment have not completely dropped. They seem to hold on longer in the units that are cut once in two years than in those that are mowed every year.

A number of species of native grasses have been collected during the summer, and will be sent to the North Dakota Agricultural College for chemical analysis. The grasses were all collected at the time they were about in full bloom.

Arboriculture.

Sets of new application blanks for 1926 plantings have been mailed to 72 County Agricultural Agents operating in Montana, North Dakota, South Dakota, and Wyoming. Caragana seed to the extent of 453 pounds has been picked the early part of the week, and also 27 pounds of Pincherry. Hoeing and cultivating has commenced in the specie testing blocks as weeds are again making a very rapid growth.

Mr. Ernest George returned to the station August 3. He reports he found the 1924 plantings showed very fine stands, and the land selected for new demonstrations in 1925 was almost without exception in splendid condition. Reports from all inspectors suggest that the County Agents are using good judgment in selecting new demonstrators, and that the instructions for preparation of the land are being carried out with much greater care than in past years.

Horticulture.

The weeds have been growing apace during the last two weeks of dry weather. Most of the work, therefore, has been concentrated on cultivating and hoeing.

Mandan, continued:

The last of the small fruits were picked during the week. A number of selections among the gooseberry seedlings were made this year. Some are distinctly larger and of better flavor than the parent varieties. Sandcherry and Ribes odoratum seedlings are also ripening and selections among them being made.

The work of self-pollinating in the ear to row plantings of Golden Bantam, sweet corn is now almost completed. The weather being still cold and cloudy, it is doubtful if all the ears will mature this season.

Tomato selections in the breeding plat are starting to ripen and selection work will be started next week.

Robert wilson and W. P. Baird left on August 7, by automobile, for Winnipeg, Canada, to attend the annual convention of the Great Plains section of the Society for Advancement of Horticultural Science. Mr. A. C. Dillman, Agronomist, Office of Cereal Investigations, accompanied them as far as Minot, on his way to the Moccasin and Havre stations.

BELLE FOURCHE:

The first good rain of the year occurred on August 5. On that date a total of 1.41 inches of rain fell, most of it within a period of 20 minutes. On land that has been cropped this year there was little or no run-off. On most plats the cracks in the ground were not closed. Where the land had been worked down this spring and little or no crop was growing as where corn was planted on spring plowing, the soil was wet to a depth of not more than three inches. The run-off from these plats was heavy. The rain should insure a small crop of corn on fall plowing, provided the corn matures.

The week as a whole was cool for this season. It now looks as if very little corn in this section would ripen. Most of the corn is just tasseling and will require hot weather from now on as well as a late frost in order to mature. If the days and nights continue as cool as they are at present, prospects of a corn crop are very poor.

Harvesting of all small grains has now been completed and threshing will be started as soon as help is available.

Maximum temperature 87, minimum 45; precipitation 1.44 inches.
A trace or more of rain fell on six days of the week.

ARCHER:

The weather continues dry with a maximum temperature of 95 degrees and a minimum of 46 degrees with only .13 inch of precipitation. Dense fogs occurred August 6 and 9 and hot winds August 7. During the warm days the crops look very bad but since the hot spells are rather short the crops soon respond to the cool weather. This holds true with all crops except millet, which has remained in a very bad condition throughout the week.

Archer, continued:

The potato bugs have about succumbed but not without inflicting serious damage to the potato crop. A handful of dead bugs lie at the base of the stripped vines on the outside rows of the plats. There remain only two rows of undamaged vines on one plat, the bugs having come in from surrounding plats when their food supply became exhausted.

Practically all hoeing for the season has been completed and all plats of winter wheat except the late seedings have been harvested. The increase field of early oats was cut August 8 and preparations for threshing are in progress.

NORTH PLATTE:

Threshing has been in progress on the station, with but few interruptions, during the past two weeks. Grain yields are much better than was anticipated. The consensus of station "expert" opinion had placed maximum yields of winter wheat at 35 to 40 bushels per acre. On the D. L. A. project, single plat yields of 58.1, 58.5, and 57.0 bushels per acre were made on fallow, green manure peas, and green manure rye, respectively. The average yield on all fallow plats is well above 50 bushels.

Two five acre fields after corn and fallow yielded 41.7 and 57.2 bushels per acre respectively.

An unusually favorable response was secured from early fall plowing. Yields have not yet been summarized but it is apparent that there is a greater difference between yields on early and late plowing than between early plowing and fallow.

Spring grains are also yielding very well. All grain is of unusually high quality.

It is difficult to explain high grain yields and a limited moisture supply. Low temperatures probably have been a contributing factor. When the results are finally digested, however, it seems likely that the season will be outstanding in respect to economy of water used in grain production.

Dry weather since July 1 has caused a continual decline in corn condition. Stalks have come into tassel fully three feet shorter than last year and ear shoots are having a hard struggle.

COLBY:

The week just closing has been the most unfavorable week that we have had all year to do the work which we had planned to do. It was too wet all week to thresh. Approximately an inch and a half of moisture fell during the week which was well enough distributed to do the corn and sorghums considerable good.

Corn and sorghums are looking much better since the rains. Sorghums are growing nicely and corn is silking good. There will be a few plats that had burned so severely before the rain of July 29 that they will not recover enough to produce corn. The big majority of the plats as well as the fields were not hurt by the hot weather sufficiently to damage them. A great many fields of corn are late and the fall will have to be favorable to permit of maturity. The earlier sorghums are well headed. The field of Early Sumac on the station is looking fine. Milo on the D. L. A. project where there is a sufficient stand, is growing rapidly and quite a few heads are showing on the surface planted.

Work during the week consisted in working sorghums, spring-tooth harrowing the summer fallowed plats, digging the stumps out of the orchard, fixing fence, repairing the buildings, and general odd jobs. Selfing of the corn smut nursery was continued at various times during the week.

Visitors during the week included Superintendent E. F. Chilcott, of the Woodward, Oklahoma, Field Station, Professor C. O. Johnston, of the Pathology Department of the Kansas Station, and Professor Lyons, of the Soils Department of the Kansas Station.

Weather remained cool and damp throughout the week.

GARDEN CITY:

The past week has been a continuation of the hot, dry weather. Temperatures ranging from 103 to 105 were recorded on four days of the week. Precipitation was recorded in the eastern half of the state, but the only rain here netted .12 of an inch.

Sorghum crops are withstanding the dry weather and practically no damage has shown up thus far. Milo is in full head and the kafirs are just emerging from the boot. Cowpeas are in full bloom.

Field work has consisted of early fall plowing of wheat stubble plats and of hoeing roadways and alleys.

Maximum temperature 105, minimum 68; precipitation .12 inch.

TUCUMCARI:

As a result of only a trace of rain the past week and only 0.29 inch since July 7, crops are rolling extensively and in some cases firing. The weather has been unusually hot the past two weeks, tending to make conditions favorable for plant injury. Broadcast cane has stopped growth, although most row plants still seem to be developing. Heads are appearing on most milo plats, while a number are practically in full head. Much of the kafir is in the boot, while the small cotton plants do not show drought injury.

Tucumcari, continued:

Cowpeas are still growing and will make excellent yields if rain is received soon. Continued drought will cause a very light yield of all crops, in spite of the fact that moisture conditions are favorable below the second foot. Soil moisture samples August 6 on M. C. milo show a moisture content ranging from 3.9% to 5.3% in the first foot; 7.3% to 8.6% in the second foot. M.C.D. fallow, showed 6.4% in the first and 12.0% in the second foot.

H. J. Clemmer, of the Dalhart Station, arrived yesterday and repor that the drought experienced here is even more severe at and around Dalha
Maximum temperature 102, minimum 62; precipitation, Trace.
Evaporation 2.684 inches. Average wind velocity 5.0 miles per hour.

BIG SPRING:

Weather conditions still remain hot and dry although several good chances for rain have been missed during the past week.

Although cotton remains green and has a good many bolls set on, it is making very little growth. Milo plots are burning up without showing any signs of a head while others are heading at about twenty-four inches high.

The rainfall for the first seven months of the year has totaled 6.62 inches as compared with a twenty-year average of 10.78.

The work this week has consisted mainly of hoeing out fence rows and roadways, painting cattle sheds and pens, and watering trees.
Maximum temperature 103, minimum 67; precipitation 0.

LAWTON:

Another week of high temperatures and hot winds has been detrimental to sorghum and cotton crops and alfalfa as well. The basal leaves on sorghums fired rapidly this past week and evidence of forced maturity was indicated in the general appearance of the crops. Chinch bugs are also intensifying the drought damage.

Cotton wilted during the daylight periods, showing an acute demand for water. Wilting of the leaves was more noticeable on the earlier planted cotton where several well developed bolls are found on each plant. Later planted cotton, now in full bloom, showed less wilting but the temperatures are too high for successful fruiting.

A few beneficial rains, local in territory, fell in surrounding country. But territory within a few miles of Lawton remains dry and badly in need of rain.

Lawton, continued:

All of the broom corn plats were harvested the latter part of the week and a fairly good crop of brush was produced.

About nine tons of cowpea hay was harvested on the land that alternates with the forage and the grain sorghum projects. The hay will remain in the stack until sufficiently cured to permit baling.

From August 1 to August 9, inclusive, the maximum temperature ranged from 100 to 104. Only a trace of precipitation was recorded during the week. It has now been more than a month since precipitation of any consequence has fallen.

WOODWARD:

The fore part of the week was very hot and windy, the wind averaging 12.6 miles per hour for 72 hours. We then had a rain totaling .91 inch and the weather has been a little cooler. The hot winds caused the corn on the D. L. A. project to ripen very rapidly and it was harvested on the 5th.

Six of the dairy cows were shipped from here Tuesday morning. They are being transferred to the Utah Station. Mr. Bateman, of the Utah Station, accompanied the shipment. About 600 feet of telephone line was moved, to get it away from the trees, so as to improve the service. All crops that are not too large are being cultivated since the rain. Other work has consisted of spraying the orchard, picking fruit, cleaning up fence rows, cutting alfalfa, trimming hedges and other odd jobs. A few grapes were picked, They are much later than usual this year.

Mr. E. F. Chilcott returned from a trip to the Kansas Stations. Maximum temperature 102, minimum 67; precipitation .91 inch. Evaporation 2.527 inches. Average wind velocity 8.8 miles per hour.

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WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

AUG 16 1924

REPORT FOR WEEK ENDING AUGUST 16, 1924.

HAVRE:

Temperatures were slightly below normal for the week. The average minimum was 50 degrees and the average maximum was 80 degrees. Precipitation amounting to .28 inch was recorded on two days. The mid-season and late seeded crops have suffered but little during the week. While the growth is not high this year the grain is filling in fair condition.

Except for the fallow and a few spring plowed plats, all wheat on the rotations was harvested during the week. Corn made a fair growth but has been retarded due to hail injury on August 1. This crop has fertilized in good shape and some of the early varieties are nearing the roasting ear stage.

Second cutting of irrigated alfalfa was stacked the first of the week. All fallow was cultivated with the duck-foot and left ridged for the winter.

JUDITH BASIN:

With the exception of a couple of cool days and nights, the week has been comparatively warm with cloudy weather prevailing during a good portion of the time. Two light showers were received, but the precipitation was insufficient to be of any benefit to crops and only served to interfere with field work.

Field work has been devoted chiefly to the harvesting of grain crops and volunteer alfalfa. The remainder of the winter wheat and about 50 per cent of the flax on the rotations has been cut, and harvesting of a 30-acre field of Karmont winter wheat is practically completed. A number of varieties of winter wheat, oats and barley on the Cereal Project have also been harvested.

Visitors at this station during the week were, Mr. A. C. Dillman, of the Office of Cereal Investigations, and Mr. I. J. Jensen, of the Montana Experiment Station.

Maximum temperature 86, minimum 38; preciritation .09 inch.

HUNTLEY:

The past week has been warm and dry for the most part and all crops are showing the need of rain. Sunflowers appear to be wilted beyond recovery. Corn, beans and garden crops are usually wilted throughout the warmest part of the day but recover to some extent during the night.

The last of the small grain was cut during the week. This was principally spring wheat varieties and pure seed plats.

Huntley, continued:

Today the Annual Project Picnic is in progress at the station. This year the picnic is being held in the Park which adjoins the station grounds on the east. At this writing there appears to be about 2000 people on the grounds. The chief speakers on the program are Governor Dixon, Director Linfield, and Robert Yellowtail, a Crow Indian. Besides the speaking the entertainment offered the crowd includes horse racing, foot races of various kinds, ball game, aeroplane flights, band concert and a dance in the big tent during the evening.

Maximum temperature 96, minimum 42; precipitation 0.

SHERIDAN:

The weather has continued warm and dry. All forage crops, and the grain still standing suffered from the lack of moisture. As the spring wheat ripened the effect of the continued dry weather became especially noticeable. A large part of the grain in many of the rotation plats shriveled badly as the grain ripened. This condition seemed greatest toward the lower end of the field, and especially in the eighth series. Many of the plats ripened quite normally, however, and there probably will be considerable contrast with this crop both in yield and quality of the grain. All but Power of the varieties, and all but a few of the rotation plats which have been ripening very uneven have been harvested.

Corn in the rotations seems to be holding up very well. All forage crops on the lighter land have been firing some, but no firing is yet noticeable with either the sorgo or corn in the rotation field.

Winter wheat was threshed during the week. Yields are the highest yet recorded here, but some yellow berries were present, some plats running as high as ten per-cent or more. Yields have been computed only to determine the highest and lowest yields. Those in the rotations ranged from 26.2 bushels per acre on MCF, listed, to 60.5 bushels in Rotation 118 on summer fallow. The highest yields in the Rates and Dates of Seeding were secured from the 9/15 seeding, the 5 peck rate yielding at the rate of 66.0 bushels, while the 3 and 4 peck rates each yielded 2.0 bushels less. The highest single plat yield was 69.7 bushels for one plat in the 5 peck seeding of that date. The next seeding made nearly 20 days later yielded nearly 20.0 bushels less.

Maximum temperature 95, minimum 43; precipitation .01 inch.

DICKINSON:

Oats and barley and a few plats of wheat were cut on the rotations during the week. Early fields of wheat are being cut on farms. Grains have been slow in ripening and are plump and apparently of good quality. Rust may reduce the yields some on a few very late fields, but the loss will be very small.

Dickinson, continued:

A few fields of winter rye have been threshed with yields of about 12 bushels per acre.

Growth of corn has been slow on account of continued cool weather.

A light second crop of alfalfa was cut August 13. Alfalfa is blooming very little so far and indications are that the seed crop will be very small.

Official visitors this week were J. H. Martin, J. A. Clark, and A. C. Dillman, Office of Cereal Investigations, H. D. Long, North Dakota Experiment Station, L. W. Kephart, Office of Forage Crop Investigations, and C. N. Ainslie, Bureau of Entomology.

Maximum temperature 85, minimum 35; precipitation .14 inch.
Precipitation to date in August .36 inch.

MANDAN:

Agronomy.

The past week has been cold and dry. The maximum temperature ranged from 68° to 84° and the minimum from 42° to 00°,. The nights have been very cool.

Fallow plats were worked with the duck-foot cultivator during the week.

Practically all harvesting of small grain has been completed on the station. A 10-acre field of oats for feed is being cut today.

Corn is still looking very good, and with rain and a late frost may make corn. In case it should come off not without rain, it would, no doubt, dry up rapidly.

Maximum temperature 84, minimum 42; precipitation, Trace.

Cooperative Grazing Experiment.

The hay in the mowing experiment was cut during the week. The hay was good quality, and the yield was the highest that has been obtained since the experiment started. The units that are mowed annually averaged 650 pounds per acre. The units cut in alternate years averaged 1385 pounds per acre. The average was from three acres in each case.

The brome-grass pasture has dried up badly, and feed is becoming short in it. Grass in the other pastures is still in good condition for grazing, except in the 30-acre pasture, which is getting short.

Mandan, continued:

Loss-report cards were mailed to all shelterbelt cooperators who received plantings in the spring of 1924. All tree nursery stock has been gone over with the hoe, also the main windbreak, evergreen specie testing blocks and combinations.

Horticultural work has consisted mainly of cultivating and hoeing of orchards, picking of fruit and budding of stock.

Visitors of the week included Mr. John M. Martin, Office of Cereal Investigations, and Mr. Leonard W. Kephart, Office of Forage Crop Investigations.

ARDMORE:

There has been no relief from the long continued drought. Corn and forage crops simply dried up without reaching natural maturity. In addition to the shortage of feed there is a great shortage of water throughout the country. Farmers and ranchers are shipping most of their stock to market.

Threshing of small grain plats was completed during the week. The yield was remarkably good considering the season. The following were the average yields of the main rotation plats:-

Spring wheat	11.8 bushels per acre.
Winter wheat	9.2 " " "
Barley	11.5 " " "
Oats	11.5 " " "

A forty-acre field of oats yielded at the rate of 8.8 bushels per acre.

Most of the corn fields on the station were cut for silage during the week. There was practically no grain on any of the fields but there was a fair yield of green feed. Three fields containing 67.5 acres yield at the rate of approximately 2800 pounds of green feed per acre.

Maximum temperature 94, minimum 49; precipitation .03 inch.

ARCHER:

During the week there has been .14 inch of precipitation occurring on four different days. The humidity has been high with an overcast sky. This condition has prevented any serious damage to the corn, sunflowers and potatoes. The other crops are nearing maturity and are, for the most part, beyond further injury from drought. The trees are beginning to show the effects of the continued dry weather.

The work at the station has consisted of harvesting and threshing with some weeding, the weeding being a continued struggle with Franseria Discolor.

Archer, continued:

The yields of winter wheat while not calculated appear to be varying from 10 to 30 bushels per acre and for the most part of good quality. That seeded on oat stubble land is nearly 100% yellow berry while the reverse is the case of that produced on fallow.

In the course of a farmers' tour the station received a number of visitors August 13 and the Superintendent conducted an inspection of the plats. Coffee was served during the lunch.

NORTH PLATTE:

Rain amounting to 1.01 inches fell on the night of the 13th. This is the first rain of more than one half inch since June 7. Corn will be greatly benefited, although some plats were so severely injured that recovery will be slight.

Early fall plowing had been delayed on account of the extremely dry soil. Two plows were started on the D.L.A. plats immediately after the rain and plowing of the 54 early fall plowed plats will be completed today. Moisture has penetrated to an average depth of about six inches on stubble plats.

Visitors during the week included Mr. Samuel Avery, Chancellor of Nebraska University and Mr. W. W. Burr, Agronomist of the Experiment Station.

HAYS:

The drought which has continued since early June was broken by a rainfall of 1.34 inches on the night of August 14. The temperature has ranged between 58 and 92 degrees.

For the past two weeks all row crops have been suffering more or less from drought, depending upon the stage of development the crops were in. Considerable of the kafir which was attempting to head is badly damaged. Corn has also been badly damaged.

During the week the field work has consisted largely in a continuation of seed-bed preparation for wheat, cleaning out drainage ditches, spreading grasshopper poison and soil sampling.

On the commercial fields the work has consisted largely in plowing and listing for wheat and harvesting of a Sudan hay crop.

GARDEN CITY:

A much needed rain, measuring 1.03 inches of precipitation, was received on the night of the 10th. Another shower on the 14th netted .30 of an inch. Both of the rains were followed by cloudy days which enabled the soil to take advantage of the moisture.

Garden City, continued:

All row crops are looking much better since the showers. Milo is in full head and kafir is nearly all headed. Cowpeas are blooming at the present time.

Field work this week has consisted of spring-toothing all fallow plats, working the seed bed for winter wheat, and removing a part of the old fence around the dry land project.
Maximum temperature 83, minimum 61; precipitation 1.39 inches.

DALHART:

This week has seen an entire change in all things generally. A good precipitation has been recorded and crops are responding accordingly. Since the first of the week a total of 2.62 inches has been recorded in five rains. This rain, from all reports received, is quite general, so should change conditions over a large area.

The station crops were either heading or in the head before the rains came. They were as a whole looking good considering the long, dry, hot weather they had withstood. This week's rain will insure a good yield and, unless some unforseen condition arises over this territory to destroy the crop, a good crop is assured. Unfortunately, some farmers will be handicapped on account of damage by grasshoppers and rabbits as well as dry weather. In some places the farmers had replanted as much as three times and failed to get a stand. Then where a stand seemed sure, it was destroyed by insects and other pests. This condition is in a minority as compared with farmers having a fair to good stand.

The fields have been too wet to work since Monday afternoon. At this time the harrows were used in the plates and varieties in order to break the crust. As soon as the fields dry off sufficiently again this work will be repeated on all crop fields as well as fallows. Fortunately, some good work was accomplished just before this rain. The field cultivator was used to go over all fallows and stubble plats and fields in order to get them in condition to receive rain without causing run-off. That night after this work was accomplished, a good rain was recorded of 1.34 inches. None of this was wasted by run-off. It has been too wet to get into the fields since the first of the week.

During the week the labor has been distributed considerably. Some fence building was accomplished but generally the work consisted of a general cleanup all around. Some hoeing was done along the edges of the roadways in order to make them show up as well as the plats. In these places it is impossible to get the weeds with a mower. Things are being put in shape for the big picnic which will be held here on Thursday, August 21. This has been widely advertised by the county agents of two counties by circular letters, and by the Dalhart Chamber of Commerce as well as the local paper. Some college educators of note will be here on that date to make some short talks to the farmers and others. During the entire week these men will lecture at the different community centers, delivering one lecture each night. A big interest is being manifested in the program for next week.

TUCUMCARI:

Four rains, totaling 1.63 inches, the past week came when badly needed and as a result of these all crops are growing well, with indications of good yields. While the 1924 precipitation is about 3.50 inches below the average January 1-August 15, the soil is well moistened to a depth of six feet and crops will mature with very little more rain.

As field work has not been urgent this week, much time has been spent in making and placing new boxes around water pipe cut-offs, packing the boxing around pipes to storage tanks, and completing other odd-time work. Some rogueing, cultivating, and hoeing has been done. Early Buff and Black Eye cowpeas have been harvested, while one plat of each was picked for seed. Other varieties of cowpeas will not be ready to harvest for about two weeks, while Whippoorwills in plats and increase will be still later. Sudan is nearly ready to cut, while the May 15 date of planting, Acme broomcorn, will be pulled early in the week.

Since the rains of this week, wheat farmers are enthused over the prospects. They have just harvested the best crop in this locality in a number of years and are hopeful that good stands will be procured this fall. Row crops are growing fast over the county, and yields should be above the average. Cotton is small and late in most instances, but is fruiting heavily.

Maximum temperature 92, minimum 61. Evaporation 2.337 inches.
Average wind velocity 5.3 miles per hour.

BIG SPRING:

Weather conditions during the past week have remained unchanged except to get a little drier. Although cotton seems to be withstanding the dry weather in fairly good shape, the yield is being reduced materially; this is especially true with sod cotton.

Sudan grass hay was hauled in this week; although the yield was very light, the quality was good. Some of the early dates of kafir and feterita were harvested as was also an increase block of cowpeas. Yields of both will be light.

Maximum temperature 105, minimum 67; precipitation .11 inch.

LAWTON:

Copious rains and lower temperatures have replaced the hot, droughty days of August 1 to 10. Now that sorghum and cotton crops are assured in so far as moisture is concerned, farm conditions are cheerful and encouraging.

On the 10th heavy rains fell in scattered portions of the county. On the 12th a rain that was general throughout several southwestern counties totaled 1.53 inches on the station. This rain fell gently and soaked the ground in good shape. On the 16th a torrential rain of 1.10 inches fell and was accompanied by a terrific wind from the west. The intense velocity of the wind was of short duration and resulted in practically no damage.

Lawton, continued:

Freed sorgo, Black Amber, and June corn were harvested August 15. The present indications are that nothing more will be mature before about the 25th.

Mr. E. F. Chilcott visited the station on the 16th.

WOODWARD:

A very severe wind, rain, and hail storm visited this section of the country on Tuesday, August 12. Considerable damage was done by the wind and hail in a strip running from north to south, about four miles east of the station, and about 25 to 35 miles in length. Many farm buildings were unroofed and one man lost his barn, and three horses, and crops were pretty well stripped by hail in a great many places. Precipitation of 1.38 inches was received on the station and about 1.90 inches in town, and there was probably as much or more in nearby localities.

Most of the work done during the week consisted of breaking sod on the dairy quarter, hauling gravel for a new silo which has been started, picking fruit, etc. D.L.A. plats received their last cultivation.

Superintendent Chilcott left Wednesday night for Lawton, Oklahoma, and Greenville and Big Spring, Texas. Mr. G. C. Husmann, of the Department of Agriculture, Washington, D. C., visited the station on the 15th and Mr. L. F. Locke accompanied him to Wichita where they visited an 8-acre vineyard belonging to Mr. T. B. Young, who has had a vineyard at that place for from 35 to 40 years.

Maximum temperature 91, minimum 63; precipitation 2.16 inches. Evaporation 1.30 inches. Average wind velocity 4.9 miles per hours.

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

AUG 23 1924

REPORT FOR WEEK ENDING AUGUST 23, 1924.

HAVRE:

Three nights during the past week the minimum temperatures have been below 50° and all others 54 or below. Maximum temperatures have ranged from 72 to 80.

With these rather low temperatures there were two showers totaling .28 inch. Corn made fair growth but at best will be short. Under favorable conditions grain may mature. Threshing of barley and oats started on the 22nd.

Dr. Kempton, Barberry Eradication, Mr. Christopher, in charge of Barberry Eradication in Montana, and Mr. E. J. Bell, Jr., were station visitors on the 23rd. Mr. Henry L. Lantz, County Agent of Phillips County, spent the 22nd at the station.

JUDITH BASIN:

The past week has been comparatively cool, with cloudy threatening weather prevailing during a greater portion of the time. Four light showers were received, but the precipitation was only sufficient to interfere with harvesting operations.

Corn and potatoes have made a noticeable improvement. Sunflowers are commencing to wilt, and trees are showing distinct signs of suffering from lack of moisture. Barley on the rotations is practically ripe, and spring wheat is maturing very rapidly.

Field work has consisted of cultivating fallow fields, weeding of trees in the shelterbelt experiments, rogueing of spring wheat plats on the rotations, seeding an increase field of winter wheat, harvesting of flax on the rotations and several varieties of different small grains on the Cereal Project, and threshing of winter wheat nursery. A concrete top was constructed over the new well and the pump and pump-house were moved to the new well.

Mr. L. W. Kephart, of the Office of Forage Crops Investigations, visited the station on the 18th.

Maximum temperature 80, minimum 40; precipitation .15 inch.

HUNTLEY:

Soil sampling, fallow cultivation and threshing have been the major activities of the past week. Moisture determinations taken on the corn land show the water supply to be practically exhausted for this crop. Cool and cloudy weather, which prevailed during the greater part of the week, has kept the corn from firing seriously.

Huntley, continued:

Threshing of the Dry-Land crops has been completed with the exception of oats and flax. Yields of winter wheat have ranged from 32 to 46 bushels per acre while spring wheat made yields of from 20 to 38 bushels per acre. Barley, rye, peas and the few plats of oats that have been threshed show yields something above the average.

Maximum temperature 90, minimum 37; precipitation .09 inch.

SHERIDAN:

Continued dry weather has prevailed with the exception of a light rain on the evening of the 20th. There was not enough precipitation at that time to be of any benefit, however. All crops still standing are showing the effects of the continued dry weather. No firing has been evident, however, except in spots on the lighter soil.

The remainder of the wheat, except the last two dates of seeding, the flax, and one variety of the millet saved for seed, were harvested. All of the oats on the station and the barley in the rotation field have been threshed. Yields of the crops that have been threshed are, as follows:

	Winter wheat	Oats	Barley
	(Bushels per acre)		
Highest yield	60.5 (Rot.113)	70.9 (Rot.71)	65.0
Lowest yield	26.2-MCF	25.0 "576	43.1 MCF
Disked Corn Ground - Ave.	46.7	56.6	65.0
Disked Oats Ground - Ave.	46.3	44.7	
Disked Flax Ground			59.2
Sp. Plowing - Ave.		49.6	49.9
MCA	33.7*	52.5	46.0
Fall plowing -Ave.	39.1	59.3	
MCB	39.2	51.9	48.0
S.Till - Ave.	52.3	61.8	
MCC	45.8	62.2	54.2
Green Manure	51.7	53.1	
Sub-soil	28.8	50.0	55.4
Listed	26.2	47.5	43.1
Average	45.5	55.1	53.4

* Late fall plowed for winter wheat.

Maximum temperature 90, minimum 41; precipitation .31 inch.

MANDAN:

Agronomy.

Heavy rains fell during the past week, and all field operations have been delayed. A good deal of damage to headed grains may result from the rains. There is a great deal of newly staked grain in the country and the heavy rains soaked into them badly.

Mandan, continued:

Corn has been benefited by the rains. Corn over the county is so late that there is not much chance for mature grain, unless a very unusual fall follows.

It was planned to start threshing early in the week, but it will now, no doubt, be the middle of next week before any threshing can be done.

On the evening of August 18, 1.21 inches of rain fell in less than two hours. This was accompanied by a high wind, and severe lightning. On the afternoon of the 20th, .95 inch fell. The ground is now in excellent condition for plowing, which has started in some sections of the county.

Maximum temperature 82, minimum 47; precipitation 2.35 inches.

Cooperative Grazing Experiment.

Native vegetation improved slightly from the rains. The brome grass was greatly benefited. It is now starting its fall growth.

Some work was done on the dam in the reserve pasture. The fill has been raised about 2½ feet. This was done in order to insure the safety of the dam, which has been full most of the summer, and heavy rains would bring the water to the top of the old fill.

Arboriculture.

Shelterbelt inspectors are nearly through with the season's work, and are expected to arrive in Mandan the latter part of next week.

Robert Wilson and W. P. Baird returned Wednesday from a visit to the Government Tree Planting station at Indian Head, Saskatchewan, Canada. It was especially interesting to be able to observe plantings of different tree species, which have been set out approximately twenty years, as compared with plantings of the same species at the Mandan station of only half this age. The Canadians have reduced the number of tree species used for general shelterbelt plantings to five or six, namely:- Green ash, Box elder, Russian poplar, Caragana, White spruce and Scotch pine.

It was interesting to note that they are coming to regard Willow, and also the Poplar, as of questionable and, at best, only temporary value for shelterbelt plantings. The 4x4 feet spacing is still used for their cooperative shelterbelt plantations, and, judging by the experimental plats at Indian Head, this spacing has proven satisfactory for at least a twenty-year period, with such trees as Ash and Box elder. It seems unfortunate that blocks of wider spacing were not also planted at the same time as the original experiments were started, as there is no actual data to show whether the wider spacing would be superior or inferior at the end of a twenty-year period.

Mandan, continued:

Horticulture.

Raspberries were picked on the 18th and 22nd, the yield and the quality being only fair. Black raspberries are yielding very slightly. Sioux sandcherries are ripe, but the yield is light and the quality poor to fair. Yellow flowering currants are yielding their usual heavy crop, and some further selection work is being done. Plums are very late this year, not even Opatas being ready to pick at the present time. This variety was ripe on the 4th of August last year.

Budding has been completed. Besides the regular budding in the nursery, a considerable amount of budding is being done in the Hibernal and Virginia crab orchard.

The lawns have been irrigated for the second time this season.

Early cabbage from the acre garden is yielding well. Increasing yields of tomatoes, cucumbers, peppers, summer squash, and late planted cauliflower are reported. The celery is being blanched.

The station selection of Golden Bantam is now giving good yields, while the regular commercial stock is not ready for use.

Tomatoes in the breeding plat are showing up well this season. A number of selections have been made with the bulk expected to be finished next week.

A large part of the horticultural labor has been spent in hoeing during the past two weeks.

Mr. A. W. Henry, engaged in Flax Rust Investigations, University Farm, Saint Paul, visited the station on August 20, and Mr. F. A. Coffman, from the Office of Cereal Investigations, arrived August 23, and will remain for two or three days.

ARDMORE:

Throughout the week the weather has been exceedingly hot every day and unusually cool at night. There has been no precipitation. The ground is very dry and the county presents a very much "burned out" appearance. Threshing is in progress in this section and wheat yields are from two to ten bushels per acre. Perhaps a fair yield would be about five bushels per acre.

Ardmore, continued:

Rain is badly needed to supply stock water. Heavy shipments of cattle are being made because of the shortage of water. A good many diseases have manifested themselves among cattle because of the poor water and shortage of feed. The superintendent of the station is frequently called upon to visit farms because of affected cattle. Among the diseases noted has been Stomatitis and Hemorrhagic Septicemia. There also appears to have been some cattle on the range poisoned from eating Two Groved Milk Vech (Astragalus bisulcatus). Some of the steers belonging to the Department which are away from the station on pasture for the summer have had pink eye, but have recovered.

Some silage remains to be put in the silo on the station. Fall plowing is in progress.

Maximum temperature 101, minimum 38; precipitation 0.

BELLE FOURCHE:

The wheat, winter wheat, rye, barley, and flax were threshed during the week, and most of the oats were threshed. Yields were for the most part surprising both in the quantity and quality of the grain produced. The average yield of spring wheat was 21.5 bushels per acre. The maximum was 27.8 bushels on rotation 408. The minimum was 11.3 bushels on Plat A of the M. C. Series. The average weight per bushel was 62 lbs. Winter wheat produced an average yield of 30.5 bushels with a maximum of 39.7 bushels on plat C of the M. C. Series and a minimum of 19.7 bushels on plat F of the same series. The average weight per bushel of the winter wheat was 60 lbs. The three plats of winter rye produced an average yield of 26.7 bushels per acre weighing 55 lbs. per bushel. The average yield of barley was 28.3 bushels per acre and the average weight per bushel was 50 lbs. The maximum yield was 43.3 bushels on plat C of the M. C. Series and the minimum 12.1 on Rotation 7. The oats are about two-thirds threshed. The average yield will, no doubt, be above 45 bushels per acre. In comparison with the other grains the oats are poor in quality as the test weight is only about 29 pounds per bushel.

There were frequent rains during the week but no heavy rain fell. The rains delayed threshing considerably, however, The results of the heavy rain the early part of the month are now apparent. Corn planted early in May is now up. The corn that did come up in season appears to have enough moisture to carry it to maturity.

Temperatures during the week were moderate. Night temperatures were lower than normal. On the morning of the 22nd a minimum of 40 was recorded. Light frosts were reported in places.

A destructive hailstorm covering a wide territory wiped out most of the crops on the western and southern portions of the project.

Maximum temperature 85, minimum 40; precipitation .30 inch.
Precipitation for August to date, 1.95 inches.

ARCHER:

Dry weather continues with rather high temperatures and heavy winds thus increasing evaporation.

The oats on the Dry Land plats have been harvested and the spring wheat is being cut today. Monday we expect to harvest most of the varieties of small grains and begin the filling of the silo with sunflowers. All of the increase millet has been cut and is being stacked. The quality is very good and more hay is being stored than last year.

The early corn is in the roasting ear stage and the silage fields will be ready for harvest as soon as the sunflowers are in the silo.

It has been found necessary to feed the cows grain in order to maintain the milk flow while on the dry pasture. Those animals that go dry easily have had a splendid opportunity to establish a record which fits them for the butcher block.

Maximum temperature 91, minimum 42; precipitation 0.

NORTH PLATTE:

Weather has continued dry during the week. Corn which was green before the rain of last week has continued green. That which had fired before the rain was not much benefited.

Russian thistles are growing rapidly on stubble ground and present the usual problems in methods of disposal. If allowed to develop unmolested a heavy crop of seed matures which not only infests the ground upon which they grow but all surrounding territory when they break loose and blow about in the winter and spring. Disking, while effective in killing young thistles, is apt to destroy the contrast between fall and spring tillage. The usual compromise is being carried on, of mowing the plats worst infested. This does not prevent all seed from developing and reduces the moisture loss which would occur if nothing was done, but it at least helps the appearance of the project.

GARDEN CITY:

Growing conditions have been favorable during the past week although little moisture was received. The sorghum crops headed this year about the normal time for heading but are somewhat more dwarf than usual.

Field work has consisted of building a part of the new fence around the Dry Land project, planting the first date of winter wheat, plowing under cowpeas for green manure and hoeing roadways and alleys.

Maximum temperature 102, minimum 59; precipitation .19 inch.

DALHART:

This has been another hot week. No precipitation was recorded during the week. The wind has been light on some days and plentiful on others. The week as a whole has been rather sultry.

Crops have grown wonderfully since the recent rains. Everything is looking good at this time and practically all crops are headed. From the present conditions the prospects are good for crops this year. The cotton has been clooming for some time but there is nothing to indicate that a bumper yield will be obtained. Some of the stands were ruined by rabbits and grasshoppers but from 12 inches up the stands are pretty good. The varieties are not comparable one with the other. It is impossible to make them comparable due to some being damaged worse than others by the pests, and some having a higher percentage to germinate and survive the rigid conditions.

The entire cropping field has been gone over with the single row harrow and cultivators since the rain, so that everything is looking good. Most of this was finished before the Farmers' picnic.

The picnic was held on Thursday of this week as per schedule. A large crowd was in attendance and everybody seemed to have a good time. Considerable interest was manifested in the crops. After dinner was finished, some lectures were made on cooperation and community organization and the possibilities of dairy farming for this plains country. The community talk was made by Mr. Walton, Director of Extension for Texas A & M, and the Dairy talk was made by Mr. Ridgewey, of the Mistletoe Creameries of Texas. Mr. Ridgeway was formerly Head of the Dairy Division of the Texas A & M. After speaking there was a fast ball game. One farmer and one business man chose players from the crowd. The farmers' team won the honors. This was one of the most interesting games of the season, the two playing a tie until the last of the seventh inning. The event closed with everybody feeling good and apparently well pleased with the day's doings. All business houses were closed from 11 until 4.

TUCUMCARI:

Although the total rainfall since January 1 has been only 8.72 inches, or less than two-thirds the average amount for this period, crops have grown well and will make satisfactory yields if one or two good rains are received soon. Most sorghums are heading or forming seed and will require moisture very soon to make maximum yields.

Soil samples on M. C. milo plats the 20th showed very rapid drying of soil, with extensive drawing from the fourth foot. The past month the M.C.C. plat (on fallow) has been lowest of all plats in total moisture contained in six feet, while plat A has been higher than plat B.

Tucumcari, continued:

To date this has been the second hottest August on record, as well as second highest in evaporation. No rain has been received in ten days and under these conditions moisture is used or lost rapidly.

Work the past week has included last cultivation of most plats and increase fields, disking of fallows, cutting several plats of Sudan, picking cowpeas, and the beginning of plant counts.

Maximum temperature 99, minimum 62; precipitation, Trace.
Wind velocity 4.9 miles per hour.

LAWTON:

Weather during the past week has been favorable to the growth of cotton and the maturity of sorghum crops.

Preparation for wheat has progressed steadily throughout the county while the soil is in excellent shape.

All of the dwarf feterita in the rotations except the M.C.C. plat was harvested on the 23rd. About 15 plats of grain and forage sorghums will be ready for harvest on the 25th. Another week or ten days will be required to mature these crops.

A few small bolls of cotton opened during the week. There is, however, but little of the crop that is mature. The plants are growing and fruiting fairly well. On the thin, garvely soil where the crop was pinched by the dry weather the plants are small and growth is not very satisfactory.

The maximum temperature during the week has ranged from 96 to 99 while the minimum temperature varied from 72 to 77. The wind velocity has ranged from 1.1 to 8.6 miles per hour.

WOODWARD:

The week has continued hot and dry. Row crops are all growing very rapidly. Reed Kafir on D.L.A. plats, which was planted June 20, is practically all headed with the exception of F. and G. plats in the M. C. Series which are considerably later. Dwarf Yellow Milo planted June 19 is heading but is not as far along as the kafir. Two men have been kept busy most of the week digging pit for silo on the dairy quarter. This silo is to be dug into the ground about 7 or 8 feet and extended above about 20 feet with hollow tile. All crops which were not too tall have been cultivated again. This will be the last cultivation for most of the fields. Some alfalfa has been cut and put into the barn. The single rows of the first date of variety test of corn have been harvested. About 20 acres of rye were planted the first of the week for early pasture. This is beginning to show through and poisoned bran was spread last night to control grasshoppers. Other work during the week has consisted of repairing machinery, spring toothing all fallow and early fall plowed plats, cleaning up scattering patches of weeds and picking peaches, plums and grapes.

Maximum temperature 98, minimum 65, precipitation .08 inch.
Evaporation 2.224 inches. Average wind velocity 7.6 miles per hour.

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WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

AUG 30 1924

REPORT FOR WEEK ENDING AUGUST 30, 1924.
(Unless otherwise indicated.)

HAVRE:

The temperatures during the last week have been high with the exception of the last day. The last two days were much more windy than is usual for this season of the year.

Threshing has been in progress and all the small grains on the rotations are threshed with the exception of some of the later seeded spring wheat. The following gives the maximum and minimum yields, the rotation and the method on which they were grown:

Crop	Maximum yield			Minimum yield		
	Bushels per acre.	Rotation	Method	Bushels per acre	Rotation	Method
Oats	58.5	MCC-b	8" fallow :	16.0	41	Brome
Barley	42.5	MCC-a	4" fallow :	14.0	MCE	SubS
Spring wheat	21.1	5-b	fallow :	7.3	MCE	SubS

Varieties of oats, barley and a part of the wheat were threshed. The barley yields were somewhat different this season in that the six-rowed varieties, including Coast and Flynn, were the highest while heretofore some of the two-rowed ones have been the highest. Results from the oat varieties are very unsatisfactory because of the fact that a part of the harvesting was complete previous to the hail storm which knocked out approximately 50% of the grain. Of the wheat varieties that have been threshed, Early Bart is highest with the Durums yet to be threshed.

Corn has not progressed rapidly this week due to the lack of moisture. Temperatures were high enough but there has been no rain.

JUDITH BASIN:

The past week has been the hottest which has occurred this season and likewise the evaporation was the greatest that has taken place this year. The temperature attained a maximum of 94, which is the highest that has been recorded during the past five years. Although the weather as a whole was unusually warm, it was terminated by a cold night during which the temperature dropped down to 38, and a heavy frost was received within a radius of two miles from the station.

Small grains have matured very rapidly, and all but a few plats of spring wheat on the rotations are ripe. Corn is curling badly, and all other crops are suffering from hot weather and lack of moisture. Caragana, poplars and willows are turning color, and most all of the leaves have fallen from the poplars.

Field work has been devoted to harvesting of experimental plats and increase fields, and threshing of a 27-acre field of winter wheat which yielded 37 bushels to the acre.

Maximum temperature 94, minimum 38; precipitation 0.

HUNTLEY:

The past week has been one of high daytime temperatures but cold nights. On the 27th occurred the maximum temperature for the season to date, 103 degrees being recorded for that day.

Threshing of all the Dry-Land grains was completed early in the week and teams are now occupied with fall plowing and the preparation of land for winter wheat seeding.

Corn is slowly drying up but the crop is far enough along so that a good crop of grain will be made without further moisture. The ears are well dented and glazed in most cases.

Maximum temperature 103, minimum 40; precipitation, Trace.

SHERIDAN:

The weather has continued warm and dry, the highest temperature of the year being recorded for the 28th. Corn and late forage crops fired considerably during the week. The condition of these crops, however, still continues remarkably good considering the rainfall during the last two months. A few ears of Northwestern Dent corn are beginning to ripen, and a large part of the ears are well dented.

The remainder of the small grains on the station were threshed. Of the barley varieties, Trebi again made the highest yield, but not as high as the same variety yielded in the Rotations. Marquis yielded the highest of the spring wheat varieties, at the rate of 38.7 bushels per acre, while Kota was second with a yield of 37.3 bushels. Marquis was one of the few varieties that seemed comparatively free from Root Rot, while it was quite prevalent in Kota and all of the durum varieties.

Yields in the rotations were considerably higher than was expected, considering the apparent condition of the crop at the time of ripening. The quality of the grain was generally poor, very few plats testing 60 pounds to the bushel. Yields by the different methods were as follows:

Spring Wheat
(Bushels per acre.)

Corn Ground			After Oats		MCA	MCB	Fal.	G.M.	S.S.List.	Lowest	Highest
Disked	S.P.	F.P.	S.P.	F.P.						Rot.48	Rot.17 G.M. peas
25.5	18.5	24.5	18.7	22.0	20.8	21.8	24.7	23.4	18.0	15.7	14.5	32.5

The low yield on spring plowing was largely due to the poor and uneven stand secured in the spring because of the wet condition of the land when worked.

Maximum temperature 101, minimum 45; precipitation 0.

DICKINSON:

Harvesting of wheat on the rotations was finished August 25. The crop of 1915 was the only one during the 18 years of the station that was harvested at a later date.

Threshing was started August 28. Winter wheat, spring wheat, oats, barley and rye varieties have been finished. Yields are all above average and the quality is generally good.

Spring wheat yields varied from 16 to 27 bushels per acre with the Preston variety highest. Marquis and Kota yielded 23.3 and 24.0, respectively. Durum varieties averaged lower than the common wheats due to the effect of root rot. Beloglina winter wheat gave a maximum yield of 38 bushels per acre.

The average yield of the oat varieties was 53.7 bushels. The Gopher variety gave a maximum yield of 69 bushels, Richland 67.1 bushels, and Victory 64 bushels.

Owing to the hot weather, corn has developed faster than during any previous week. The earliest corn is just in the roasting ear stage of maturity, but most of the fields are not so far along.

Opata plums are ripening and the indications are that no other variety will mature before frost.

Dr. R. A. Oakley and Mr. H. L. Westover, Office of Forage Crop Investigations, visited the station August 23.

Maximum temperature 102, minimum 32; precipitation .01 inch.

MANDAN:

Agronomy.

The past week has been fairly favorable for all field work. Threshing started on the 27th. Barley, oats, and wheat have been threshed in the rotations. Yields are running very good, but have not been calculated for all plats. The best yield of oats was about 80 bushels per acre, and wheat is running between 20 and 25 bushels per acre.

The second crop of alfalfa was cut during the week; the yield will be light.

Maximum temperature 96, minimum 51; precipitation 0.

Cooperative Grazing Experiment.

The cattle were weighed yesterday to determine their August gain. The gains have not been calculated, but they were high for the month of August. The steers in the 30-acre pasture made good gains. The steers in the brome pasture appear to have made the poorest gains.

Mandan, continued:

Arboriculture.

Mr. R. W. Hansen completed his inspection trip August 28, and Mr. A. W. Emerson, August 29. The stands in the 1924 plantings are uniformly better than any plantings yet set out. Plantings of conifers sent out this year were practically all failures. This was probably due to the weak condition of the stock when it was lifted from the beds this spring.

It was found that most of the cooperators planted the few extra trees included in their shipment this year in the garden or other suitable spots and consequently have trees on hand to replace the few losses that have occurred. Our replacement demand promises to be less this year than at any previous season.

The inspectors also report that the land in preparation for the plantings next spring, has been carefully cultivated, giving evidence of the assistance the county agents are giving in selecting good cooperators, and explaining the importance of careful preparation.

Mr. R. A. Oakley and Mr. H. L. Westover, Office of Forage Crop Investigations, visited the station on August 20.

BELLE FOURCHE:

The past week was the hottest and driest of the year. The maximum temperature was over 90 every day and on the 28th it reached 100. The minimum temperature did not fall below 50 degrees.

The hot weather hastened the development of the corn. A few ears have commenced to dent and prospects of at least part of the crop maturing look favorable. The corn plats are getting low on moisture and are commencing to wilt during the hot part of the day. It would not take many more hot days to start firing.

Threshing was completed the first part of the week. The maximum yield of oats was 60.0 bushels per acre on Rotation 8. The minimum was 20.9 bushels on plat A of the MC Series. Average of all plats 44.0 bushels.

Fall plowing of all grain plats was completed during the week. The soil was dry but plowed up fairly well.
Maximum temperature 100, minimum 50; precipitation 0.

HAYS: Week ending August 23, 1924.

The weather has been varied during the past week. There were some hot days, and some cool. The maximum temperature was 103, and the minimum temperature, 63. Three small showers occurred, all of which amounted to .53 inch.

Hays, continued:

Corn has been very badly damaged by drought so it can make but little grain. Sorghums have been damaged depending upon the time of planting and the stage of development they were in when struck by the drought. Those which were early and those which were late are now in much better condition than the medium planting.

During the week some seedbed preparation work was done, grasshopper poison spread over the project, and some soil moisture determinations were made. Also some road work and fence repairing was done.

HAYS:

Feed crops which were not too badly pinched by the drought previous to the rain of two weeks ago, are making good heads and look promising for a fair yield. Thick-seeded or broadcasted feed crops are short and have not responded with much growth to the rains. It is again getting dry and rain is needed.

Alfalfa on the low land is in bloom and is now being mown. The crop is short and light. On the upland no growth has been made since the first cutting.

Maximum temperature 102, minimum 62.

ARCHER:

There has been no break in the weather. However, there seems to be better prospects for rain today, August 30. On August 29, the temperature raised to 93° which is next to the highest recorded during the season. Today is cool with an atmosphere of fall weather. This marks the end of a long hot spell during which practically all cereals ripened and were harvested. The sunflowers began to burn badly and so on this date are being put in the silo. The yield appears to be about five tons per acre. Yesterday the corn rolled badly but due to the coolness; today it is looking very well. There is a fair development of ears; however, the stover will be short.

On August 29 a dinner was served at the station by the Ladies' Guild of Hillsdale to the Cheyenne Commercial Club and the Pine Bluffs Lion Club. About 100 business men and politicians were present among whom were Governor Ross and Mayors Allison of Cheyenne, and Beyerle of Pine Bluffs. After dinner a trip was made over the fields. Much interest was manifested in various phases of the work.

Prominent agricultural visitors were Dean Hill, of the University, Professor W. L. Quayle, and Commissioner of Agriculture A. D. Faville.

GARDEN CITY:

Weather conditions have remained about the same throughtut the past week. Practically no moisture was received. Most of the sorghums in rotation are beginning to show the need of moisture and some of them are firing quite badly. Milo is beginning to show some color and practically all of the sorghums in the first date of planting are beginning to ripen. Cowpeas will be ready to cut the first of the week.

Field work has consisted of roguing some of the sorghum plats, picking cowpeas for seed, and hoeing.

Maximum temperature 99, minimum 56; precipitation .03 inch.

DALHART:

This has been a wet week. There were five days of the week that rain was recorded. The total for the week is 2.34 inches. The greatest amount recorded at one time was .75 inch. Most of this week's rain came in rather slow showers, so that there was practically no runoff. One was a rather dashing shower of short duration.

It has been impossible to do any field work all week. The regular weekly soil sampling had to be omitted this week on account of water standing in the fields. The crops are doing nicely considering the assortment of conditions they have gone through. The field corn is attacked to a small extent by the corn stalk borer. At this time the damage will not run over from 3 to 5%, whereas it ran up to about 50% and better at this time last year. Birds are doing considerable damage to the headed grain. Even the wild ducks are here this year at this time and feeding on the maize. This is the earliest the ducks have come in for some time. It is the first time that ducks have been seen to light and feed on the station. The damage from birds of various kinds would run higher this year than usual if shooting were not resorted to.

The first two dates of broom corn were harvested last week and put on the racks to cure. The third date is just about ready to pull. Three dates of Sudan grass have been harvested and the fourth is ready at this writing. It will be harvested as soon as it is possible to get a binder into the field. Cowpeas on all rotations are ready to harvest as soon as favorable weather prevails again. Two of the varieties in the cowpea variety test are now ready to pick. It is impossible to get in to do the picking until the field dries off considerably.

These recent rains are going to cause some additional field work. Before the rains the fields were free of weeds and, since the rains started, some of the fallow plats are covered with small weeds and grass. This seed has lain through the spring and summer without germinating. The fallow plats in the south field look like a lawn, the growth of grass is so thick. It has just started, however, and will be easily controlled as soon as the plats dry off. Conditions are so favorable this fall that an unusually large acreage of winter wheat will be planted. Winter wheat is getting to be one of the standbys with many of the farmers in this section now. They have been making a good profit each year for several years and the acreage is gradually increasing.

Maximum temperature 95, minimum 59; precipitation 2.34 inches.

TUCUMCARI:

Rainfall during August totaled 3.84 inches, six showers totaling 2.16 inches being received the past week. The soil is well moistened as far as soil moisture samples are taken and indications point to a fair to good yield of all crops. Rains have been very local in character and in some localities over the county crops are still suffering for rain.

Milo on rotation plats and increase plantings is maturing, while kafir ranges from emergence-from-boot to milk stage. Birds are very numerous and are seriously injuring the earlier milo plats.

Work the past week has included plant counting, mowing lawns and native sod areas, drilling rye in the vineyard and in all field roadways, picking cowpea seed, and hoeing tree rows and some date sorghum plats.

Mr. E. F. Chilcott, of Woodward is visiting the station.
Maximum temperature 96, minimum 56; evaporation 1.624 inches.
Wind velocity 4.3 miles per hour.

BIG SPRING:

The long dry spell was broken this week by a good soaking rain totaling 1.60 inches. While this rain will help late feed and some cotton, there is a large amount of both feed and cotton which have reached the point where rain will not help them. Some cotton picking has already started in this vicinity, the first bale being ginned at Big Spring on August 20.

A trip was made up in the plains country around Lubbock, Texas, last week; there the crop conditions are about the same as those in this county. In some places the crops were good and then again they were very poor right in the same vicinity. This was due in part to the sectional rains which have occurred this summer. There have been no general rains since last spring.

The corn on the D. L. A. project was harvested this week, as were also some of the early maturing sweet sorghums and a few of the early dates of seeding of the grain sorghums. Stand counts were made on all the plats.

Mr. E. F. Chilcott visitied the station on August 18 and 19, and Mr. Miller, Extension Agronomist of Texas A. & M., on August 27.
Maximum temperature 102, minimum 70; precipitation 1.60 inches.

LAWTON:

On August 24 a maximum temperature of 102 was recorded. Since that the temperatures have been moderate, sky mostly cloudy, and the wind velocity unusually low.

Lawton, continued:

Precipitation was recorded on three dates as follows: 25th, 0.20"; 27th, 1.40"; 29th, 0.02". The rain of 1.40 inches was torrential and fell within a period of thirty minutes. The amount varied widely in the surrounding country and was erratically distributed.

All of the kafir in the rotations except the listing methods plats was harvested on the 29th and 30th. Considerable harvesting was also done during the week on the grain and forage sorghum projects.

The August rains have renewed the growth of alfalfa. Trees, grasses and shrubs all appear vigorous and in good growing condition.

The total precipitation for the month amounts to 4.35 inches, all of which has fallen since the 13th.

WOODWARD:

The weather has remained dry but not especially hot. Late crops are growing rapidly and others are maturing. Some harvesting has been done on broom corn and early date-of-planting on Cereal Project. Most of the alfalfa had to be cut before it was ready on account of small green worms, which were skeletonizing the leaves. The foundation for the new silo on the Dairy quarter has been put in. Some wheat ground and wind-breaks have been disked. Three or four men have been kept busy a good part of the week picking fruit. We have picked over 90 bushels of peaches, about 8 bushels of plums, and over 2100 pounds of grapes during the week.

Superintendent Chilcott left Wednesday morning for an inspection trip to Dalhart and Tucumcari stations.

Maximum temperature 102, minimum 67; evaporation 1.759 inches.
Average wind velocity 4.4 miles per hour.